

FY-2002-2003 PROPOSED SCOPE OF WORK for:
Redlands Fish Ladder and Gage Maintenance

Project #: C-4c

Lead Agency: Bureau of Reclamation
Submitted by: Brent Uilenberg (Project Leader)
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<u>Category:</u>	<u>Expected Funding Source:</u>
<input checked="" type="checkbox"/> Ongoing project	<input type="checkbox"/> Annual or <input checked="" type="checkbox"/> O&M funds
<input type="checkbox"/> Ongoing-revised project	<input type="checkbox"/> Capital funds
<input type="checkbox"/> Requested new project	<input type="checkbox"/> Other (explain)
<input type="checkbox"/> Unsolicited proposal	

I. Title of Proposal:

Redlands Fish Ladder and Gage Maintenance

II. Relationship to RIPRAP:

Colorado River Action Plan: Gunnison River II.B.1.e Identify and secure minimum flows below Redlands Diversion Dam

III. Study Background/Rationale and Hypotheses:

The Redlands Fish Ladder was constructed in 1996 as a component of the Upper Colorado River Recovery Implementation Program. Operation of the ladder requires approximately 100 cubic-feet-per-second cfs of water. Additionally, the reach of the Gunnison River below the Redlands Diversion Dam down to the confluence with the Colorado River requires approximately 300 cfs to maintain a water depth of 1-foot which is believed to be the minimum depth required to accommodate fish movement. Two flow measurement devices have been installed to operate the ladder and administer deliveries of water. One of these is an impeller meter in the fish ladder bypass pipeline and the second is a river gage below the Redlands Diversion. Maintenance of these flow measurement devices, along with other minor maintenance items, is required to support operation of the fish ladder.

IV. Study Goals, Objectives, End Product:

Provide maintenance support for the Redlands Fish Ladder and associated flow measurement devices resulting in the efficient operation of the ladder and water deliveries.

V. Study area

Redlands Fish Ladder and downstream reach of the Gunnison River.

VI. Study Methods/Approach

Not applicable

VII. Task Description and Schedule

1. Conduct monthly inspection of impeller meter and river gage and repair/replace equipment as required (April through October)
2. Conduct gage rating 2 times per year during low and high flow periods (April through October)
3. Prepare annual report of flow measurement readings (December)
4. Spring fish ladder start up activities consisting of installation of analog transmitter and data logger (April)
5. Conduct monthly inspection of fish ladder and maintain as required including silt/trash removal, installation of trash racks and miscellaneous maintenance items (April through October)
6. Fall fish ladder shut down activities consisting of removal impeller meter, analog transmitter and data logger (October)
7. Service/replace equipment (November through March)

VIII. FY-2002 Work

-	Deliverables/Due Dates - Functioning flow measurement devices and fish ladder	
-	Budget	
-	Labor - 5 work weeks	\$8,000
-	Travel	\$0
-	Equipment	\$2,000
-	Other	<u>\$0</u>
-	Total	\$10,000

Annual O&M cost to be incurred each year the ladder remains in operation.

FY-2003 Work

-	Deliverables/Due Dates - Functioning flow measurement devices and fish ladder	
-	Budget	
-	Labor - 5 work weeks	\$8,000
-	Travel	\$0
-	Equipment	\$2,000
-	Other	<u>\$0</u>
-	Total	\$10,000

Annual O&M cost to be incurred each year the ladder remains in operation.

IX. Budget Summary

FY-2002 - \$10,000 1/

FY-2003 - \$10,000 1/

FY-2004 - \$10,000 1/

1/ Actual costs will vary from year to year depending on maintenance and equipment replacement needs.

X. Reviewers

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XI. References